pivot™

Lever Drive
User Manual

rio MOBILITY™

The Pivot™ from Rio Mobility transforms your wheelchair into a high performance machine that can increase your mobility and physical fitness. The Pivot™ can provide a number of benefits including:

- **Easier hill climbing and higher speeds with 5 speed gearbox**
- **Reduces stress and resulting injury on shoulder rotator cuffs**
- **Increases upper body strength and supports good posture**
- **Promotes cardiovascular health**
- **Gives relief from Carpal Tunnel Syndrome by eliminating repeated grasping of pushrims**
- **Requires less manual dexterity to operate than pushrims**
- **Keep your hands clean, and no need to wear gloves**

If you're new to lever drives, you may feel soreness and fatigue at first. This is normal, but remember, over-exertion can cause injury. As always, consult with your dealer or health care professional to determine if the Pivot™ is appropriate for you.

Be patient and reasonable with your expectations; physical fitness takes time to achieve. It also takes some practice to become proficient with the Pivot™. Most importantly, have fun and enjoy the ride!

Dealer: You must give this manual to the Pivot™ lever drive user

User: Before using the Pivot™ lever drive, read this manual and save it for future reference.

Questions or concerns? Contact us:

sales@riomobility.com
(888) 559-6225
(415) 278-9662

Rio Mobility
56 Tehama Street
San Francisco, CA 94105

Rio Mobility, a Daedalus Wings, Inc. company, is a designer and retailer of innovative products that maximize options and increase mobility for wheelchair users.

We would like to acknowledge the National Institutes of Health for their support of the development of the Pivot™ lever drive.

Part Number 303
Rev C, 03/2010
© 2010 Daedalus Wings, Inc.

Table of Contents

1. Safety Warnings **4**
2. Wheelchair Requirements **5**
3. The Pivot™ Components **6**
4. Pivot™ Specifications **9**
5. Installing Your Pivot™ **9**
6. The Pivot™ Controls **14**
7. Driving the Pivot™ **16**
8. The Pivot™ Out in the World **18**
9. Special Adaptations **20**
10. Safety and Maintenance Instructions **21**
11. Troubleshooting Guide **24**
12. Limited Warranty **25**
13. Product Registration / Warranty Form **27**

1. Safety Warnings

WARNING

DO NOT OPERATE THIS EQUIPMENT WITHOUT FIRST CONSULTING WITH A HEALTHCARE PROFESSIONAL.

Do not operate this equipment without first reading and understanding this manual. If you are unable to understand the warnings, cautions, or instructions, contact sales@riomobility.com, your health professional, dealer, or technical personnel before attempting to use this equipment, otherwise injury or damage may result.

IT IS RECOMMENDED THAT INITIAL SETUP OF THIS LEVER DRIVE BE PERFORMED BY A QUALIFIED TECHNICIAN, SUCH AS A WHEELCHAIR OR BICYCLE MECHANIC.

The Pivot™ will increase the performance of your wheelchair. Follow the recommendations in your wheelchair manual. Additional information, recommendations, and warnings are included in this manual.

YOUR ANTI-TIP DEVICES MUST BE INSTALLED ON YOUR WHELCHAIR TO ENSURE A SAFE RIDE.

The Pivot™ is a specialized piece of medical equipment, with unique handling and maneuvering characteristics. Whether you are a new wheelchair user or have years of experience, you **MUST** take the time to learn and practice on the Pivot™ before you begin regular riding.

Operating in or around a lever drive involves a certain level of risk and inherent danger of serious bodily injury. These possible risks include, but are not limited to, permanent disability, neck and head trauma, limb dismemberment and in extreme cases, even death.

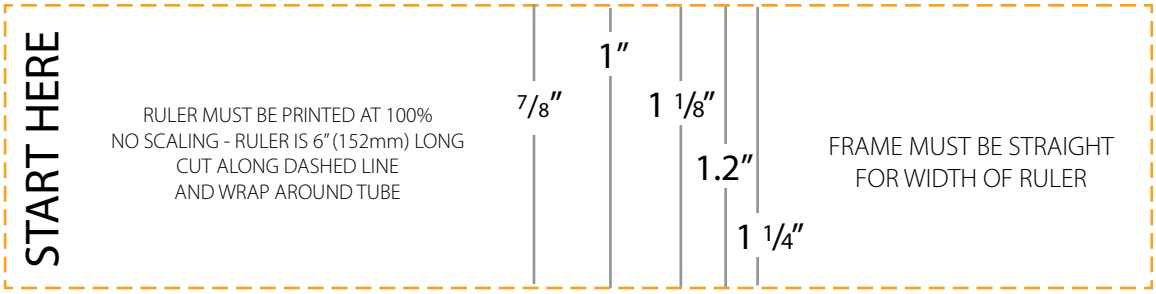
Users must ride the Pivot™ with the utmost care, caution, and safety. It is recommended that you inspect your chair and lever drive carefully before each ride.

Rio Mobility is not responsible for any injuries resulting from misuse.

2. Wheelchair Requirements

The Pivot™ is compatible with all known commercially-available wheelchairs without the need for any special adapters or kits.

Wheelchair Frame Tube Diameter	The frame tube diameter must be either: 7/8 inch (22mm) 1 inch (25.4mm) 1⅛ inch (28.5mm) 1.2 inch (30.5mm) 1¼ inch (31.8mm) If by chance your tube diameter is not listed, please contact customer service at sales@riomobility.com. If you do not know the diameter of your tubing, cut out the ruler printed below to measure. Wrap it around your tubing and note where the markings line up. The tube must be straight for the width of the ruler.
Rear Wheel Axle	Your rear wheels must have quick release axles with a diameter of ½" (12.7mm, USA standard), or 12mm.
Wheel Diameter	Wheels can be either 24" (540mm rim) or 20" (451mm rim) in diameter. Contact sales@riomobility.com for other diameters.
Anti-Tips and Seatbelts	Because of the additional power and speed possible, anti-tip devices **MUST** be installed on your wheelchair. A seat belt is also strongly recommended.
Wheel Camber	If your chair has significant wheel camber (>5°) please contact sales@riomobility.com.
Casters	Due to the potential for higher speeds, it is recommended that the diameter for the front wheels is 4 inches or greater.
Wheel Locks	May need to be removed, unless they are scissor-style.
Weight	Combined wheelchair and user weight must be less than 280lb (130kg).



3. The Pivot™ Components

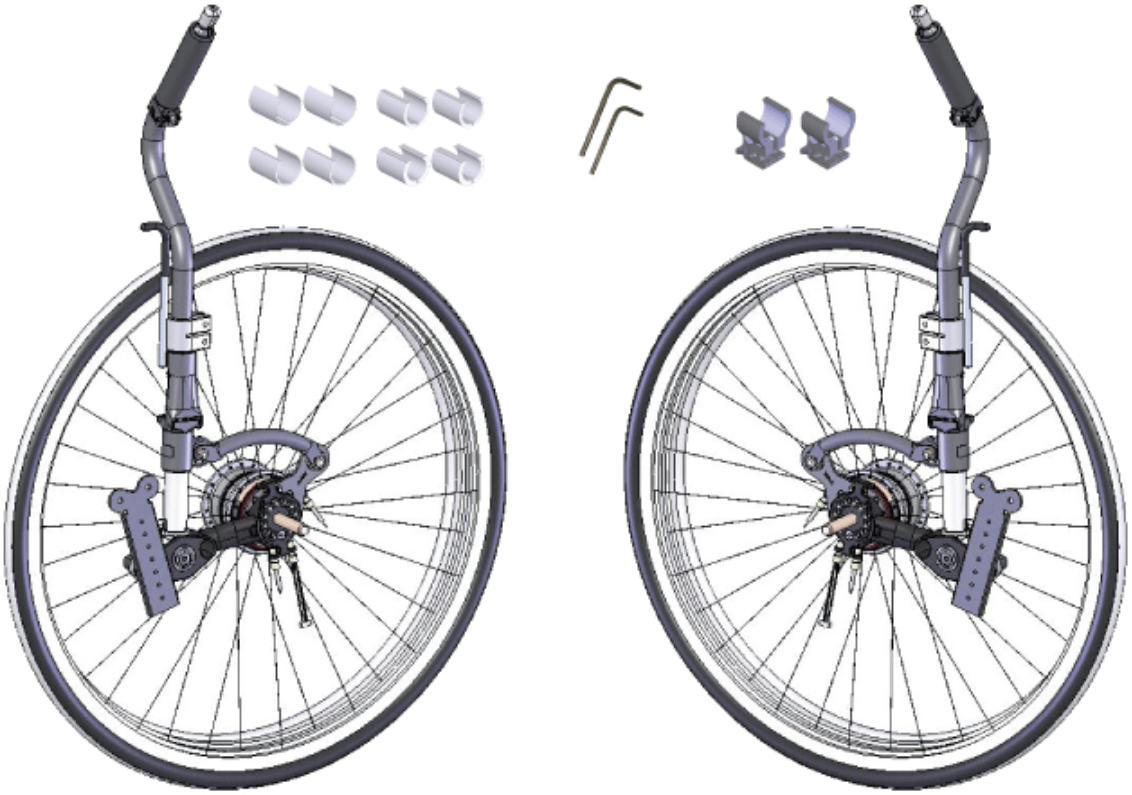
Required tools:

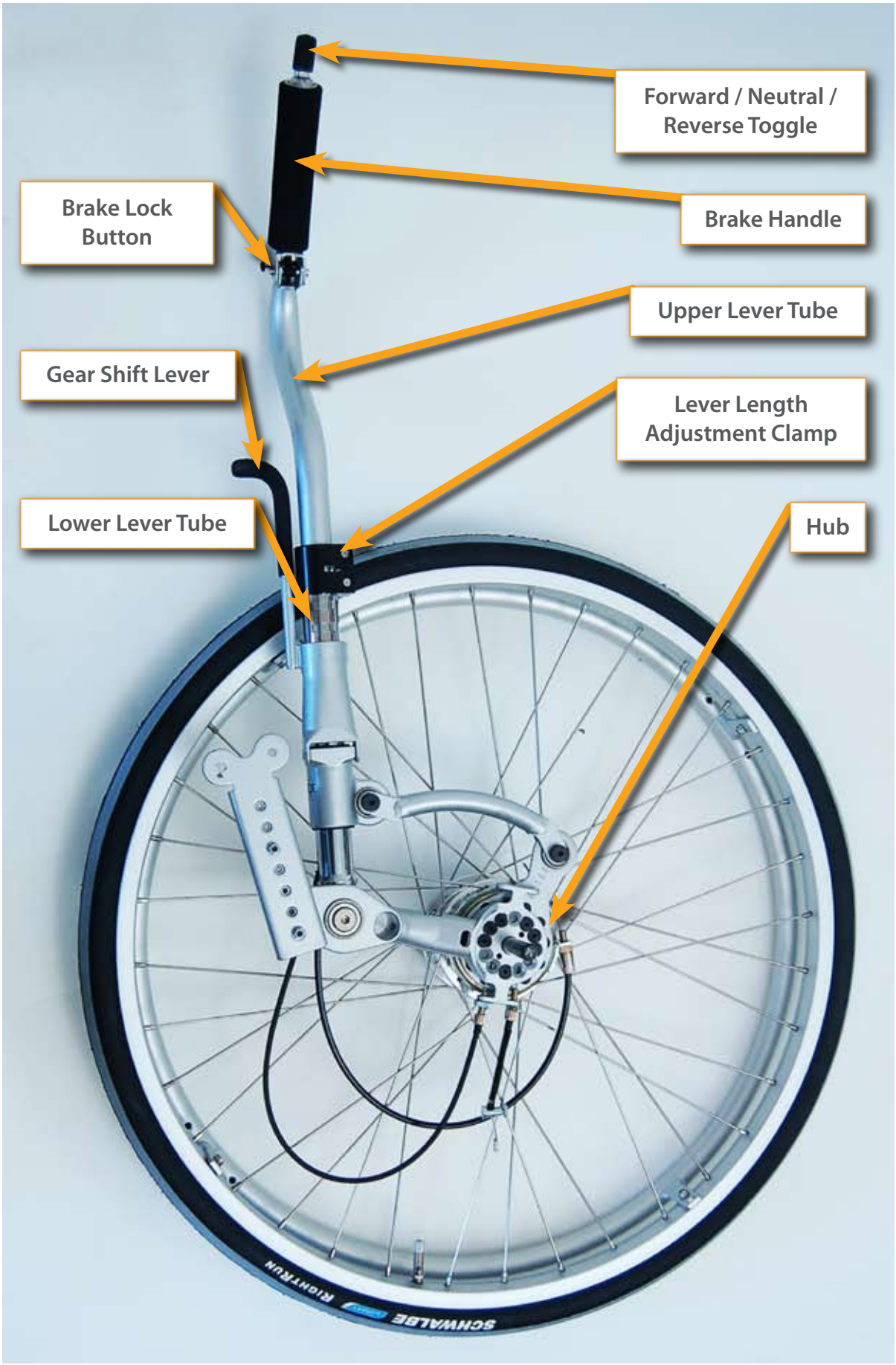
1. Adjustable Wrench
2. Pliers
3. Torque Wrench
4. Tire Pressure Gauge
5. Bicycle Pump

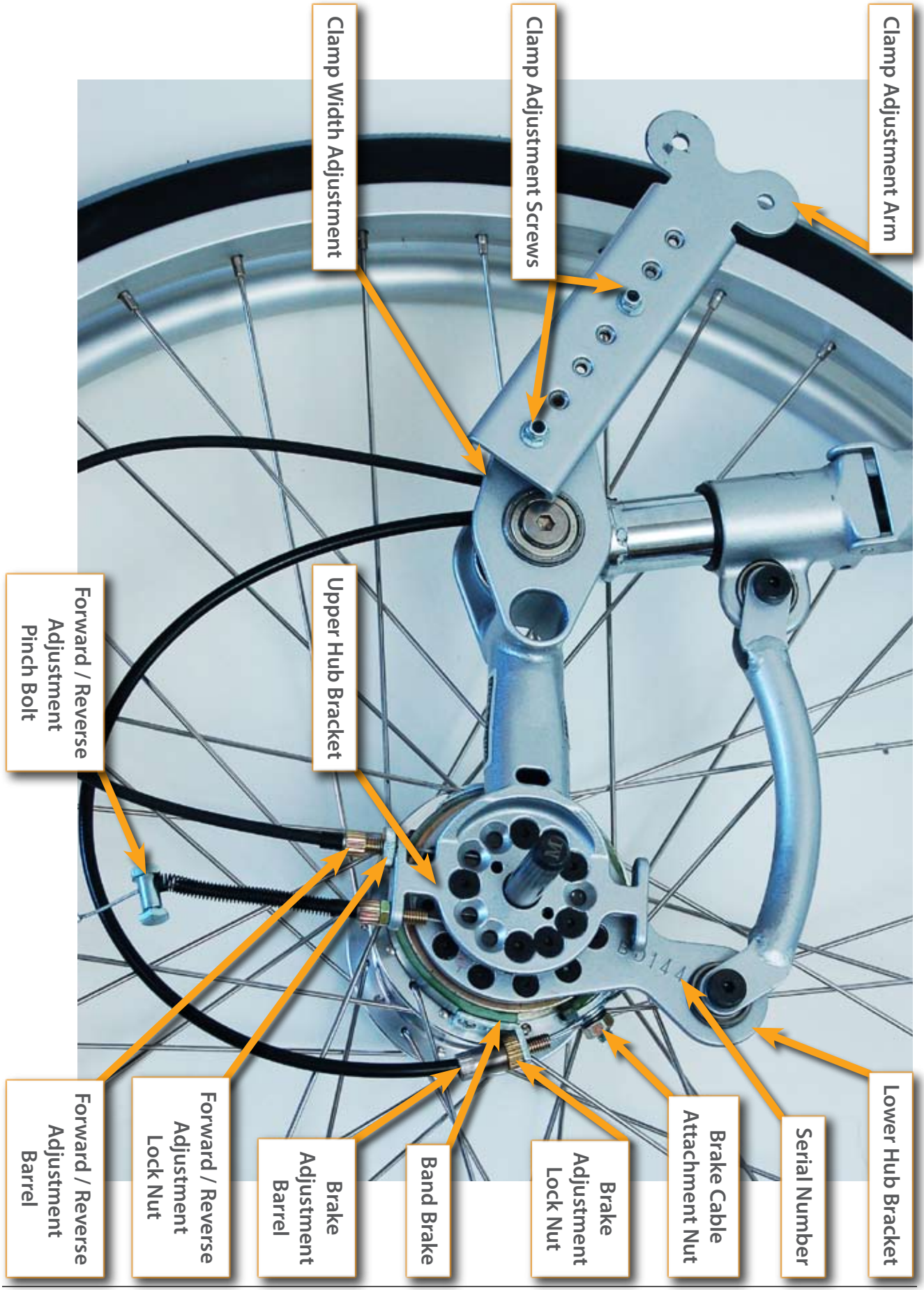
Remove the lever drive parts from the box and unpack the components. The contents include:

1. Lever Drive Assembly (left and right sides)
2. 2 Clamps
3. 4 Sets of Shims
4. 3mm and 4mm Hex Wrench

If you are missing any of these items, please contact customer service at sales@riomobility.com




Forward / Neutral / Reverse Toggle
Brake Lock Button
Brake Handle
Upper Lever Tube
Gear Shift Lever
Lever Length Adjustment Clamp
Lower Lever Tube
Hub
SCHWALBE
RIGHTRUN


Clamp Adjustment Arm
Clamp Adjustment Screws
Clamp Width Adjustment
Upper Hub Bracket
Forward / Reverse Adjustment Pinch Bolt
Lower Hub Bracket
Serial Number
Brake Cable Attachment Nut
Brake Adjustment Lock Nut
Band Brake
Brake Adjustment Barrel
Forward / Reverse Adjustment Lock Nut
Forward / Reverse Adjustment Barrel

4. Pivot™ Specifications

Gearbox	Patented Multi-Functional Gearbox with the following Gear Ratios (24"wheel) [*For reference, pushrims have a 1:1 gear ratio*] : ▫ **1st Gear - 1 : 0.9** ▫ **2nd Gear - 1 : 1.25** ▫ **3rd Gear - 1 : 1.5** ▫ **4th Gear - 1 : 1.75** ▫ **5th Gear - 1 : 2** In forward gear, both pushing and pulling result in propulsion. In reverse, propulsion results from pushing only.
Construction	All alloy steel construction for strength and reliability
Brakes	Cable-actuated band brakes
Color	Silver metallic
Weight	Added weight is approximately 16 lb (7 kg). Total weight is 24 lb (11 kg)

5. Installing Your Pivot™

Notes on Installation

Since the Pivot™ is a highly customizable product, it is recommended that initial installation be performed by two people. Once it is configured for your wheelchair, no additional assistance is usually necessary.

If you are not comfortable adjusting your wheelchair, or with tasks such as assembly, tightening nuts and bolts, or gripping a wrench, it is recommended that a qualified technician perform the initial installation. A wheelchair or bicycle mechanic is suggested.

There are three installation steps:

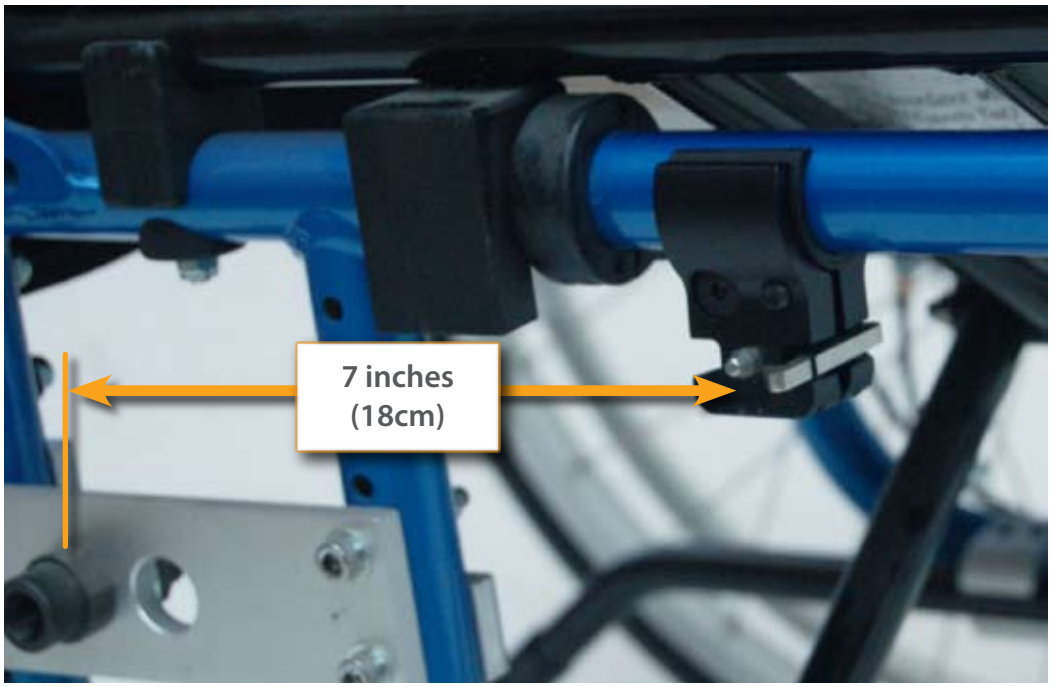
- **Installing the Clamps**
- **Mounting the Pivot™**
- **Customizing the Fit**

Familiarize yourself with the component names in the previous section. During the installation you will need to locate and/or identify these components.

Contact customer service at sales@riomobility.com if you have any difficult installing your Pivot™.

Installing the Clamps

1. Remove your quick release wheels
2. Locate the horizontal frame tube under the right and left edges of the wheelchair seat
3. Place the right clamp (the latch facing forward) near the **Suggested Clamp Position** shown below. If there is interference at this position, move the Clamp towards the front of your chair, but not more than 3 inches (75 mm). If moving them forward is not an option, you can position your Clamps further back, but again no more than 3 inches (75mm) from the Suggested Clamp Position



4. The clamps are designed to fit 1 ¼" (31.8 mm) diameter tubes. Smaller diameters are common so the following shims are provided:

7/8 inch	(22 mm)
1 inch	(25.4 mm)
1 1/8 inch	(28.5 mm)
1.2 inch	(30.5 mm)

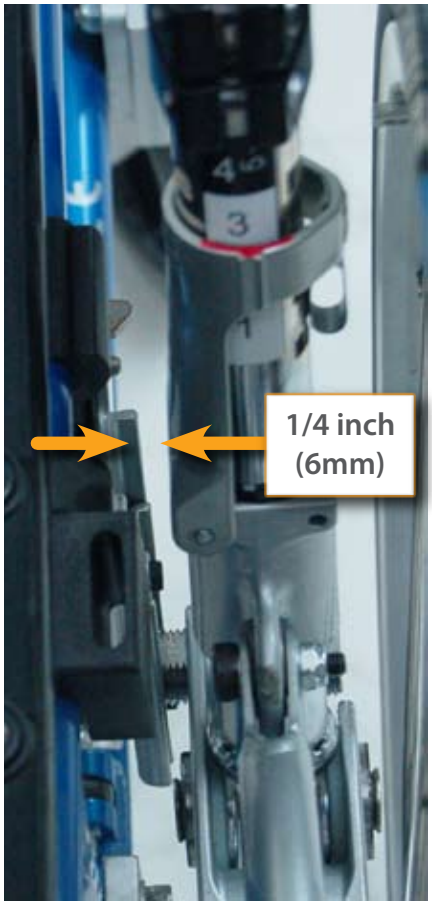
   Find the set of shims that make the clamps fit properly to the tube frame. To install the shims, place the clamp in the desired position and slide the shim into the space between the clamp and tube frame. Make sure the shims are centered properly
5. Check that the Clamp position is vertical and loosely tighten the Clamp
6. Repeat for the left side

Mounting The Pivot™

1. Loosen the **Lockdown Nut** and slide the right lever assembly as far as possible into the axle sleeve just as you would with your original quick-release wheels.

2. Rotate the lever assembly through the normal operating range to determine if it interferes with any part of the wheelchair (i.e., clothes guard, armrest). If there is interference, determine if the part can be modified, replaced, or removed.
If the obstruction cannot be removed, rotate the **Clamp Attachment Arm** as many times as necessary until there is approximately ¼ inch (6mm) clearance between the lever and the obstruction and insert it completely on the pin of the **Clamp**. To release the clamp 's latch, pull the latch away from you. Tighten the **Lockdown Nut**.

   At least 1" (25mm) of the axle must be in the axle sleeve.



3. Check the Clamp to assure that the position is still correct (vertical). Tighten the **Clamp Screws** on both sides of the Clamp using the 4 mm Allen wrench until snug (approximate tightness of 5 ft-lbs (6.8 N-m). This is approximately a force of 10 lbs at 6 inches away from the screw (45 N at 15 cm away from the screw). Do not overtighten.
4. Install the left lever in the same manner.

Adjusting The Fit

1. Check the tire pressure and inflate as necessary to within the range specified on the side of the tire
2. Engage the **Parking Brakes** (see p. 15)
3. Transfer to your chair (see p. 17)
4. Place your toggle switches in **Neutral** and shift into **5th gear** (see p. 16)
5. In an upright position grasp both padded handles and push the levers until they stop

   If the levers stop at a position that is slightly beyond your fully extended arm range, your **Range of Motion** is correct

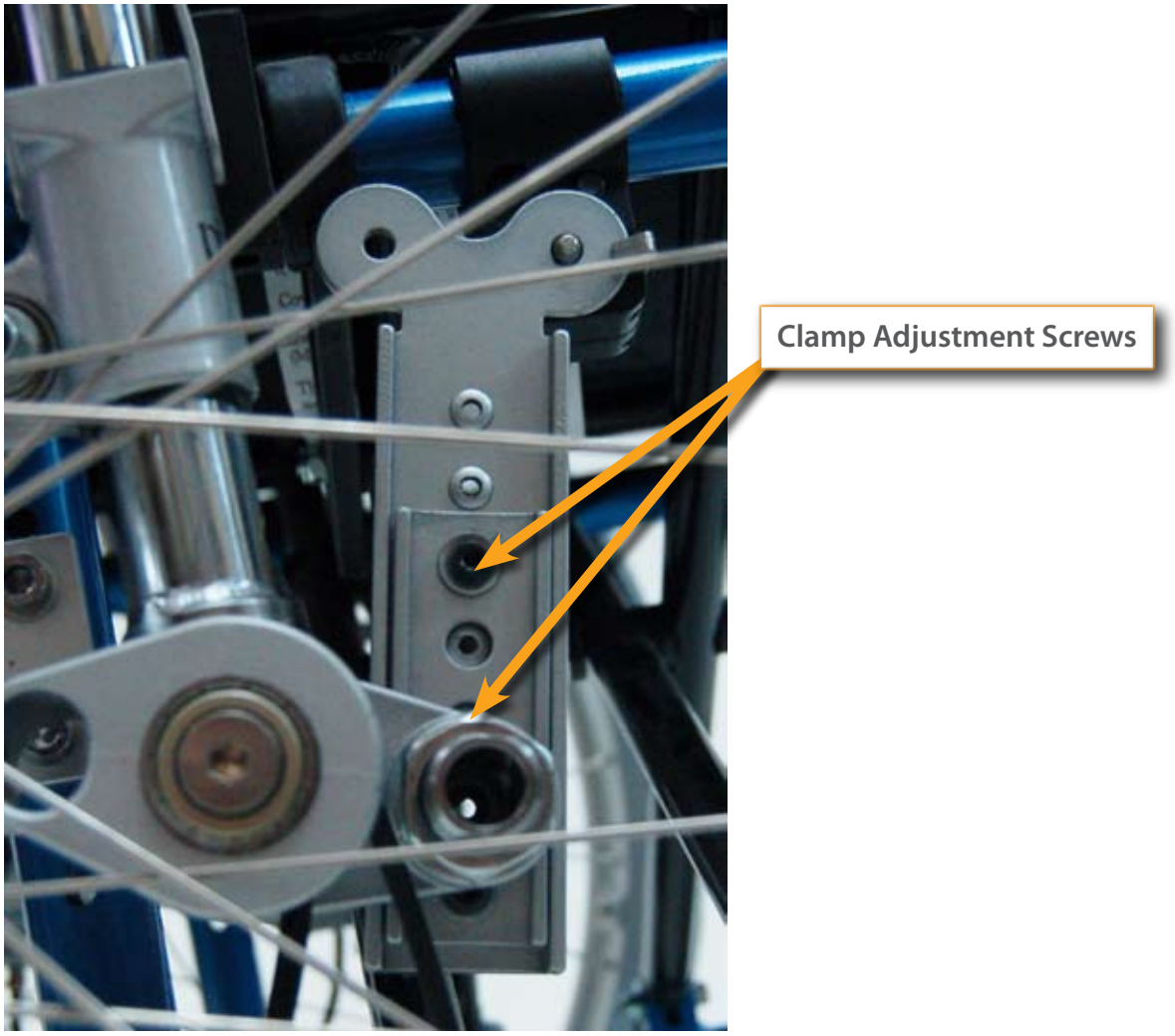
   If the levers stop more than one inch beyond your fully extended arm range, you may want to *shorten* the **Clamp Attachment Arm**

   If the levers stop more than one inch before you reach your fully extended arm range, you may want to *lengthen* the **Clamp Attachment Arm**

   Your Range of Motion must be adjusted according to the recommendations of your health care professional and feel comfortable to you

Note: If the range of motion is correct but the lever interferes with your wheelchair wheel locks, check if you can move your wheel locks to a location that will not interfere with the lever. If this is not possible, replace your wheel locks with scissor style wheel locks that retract under your seat.

6. To shorten or lengthen the **Clamp Attachment Arm**, engage the **Brake Lock**, place the **Levers** in the stowed position and transfer out of your chair
7. Using the 4mm Allen wrench and your adjustable wrench, remove the two screws and nuts from the **Clamp Attachment Arm** and slide the pieces to either lengthen or shorten. Each screw position moved will result in approximately 1 ½ inches change in the Range of Motion



When the desired position is determined, tighten the screws and nuts. Make sure there is at least one empty position between the two screws

8. Check all the nuts and screws and make sure they have been tightened properly

Your Pivot™ is ready to drive!

6. The Pivot™ Controls

Check that all components are properly installed and tightened.

It is recommended for your first few sessions with the Pivot™ to be in an open space with ample turning room and no obstructions. The use of a safety belt is recommended and you **must** have your anti-tips installed.

There are three controls:

- **Brakes**
- **Forward / Reverse / Neutral Toggle Switch**
- **Gear Shifter**

Transfer into your chair using the instructions in the next section.

On a flat surface, without pushing or pulling the levers, place both hands on the padded handles, with thumbs close to the toggle switches.

Brake

To brake the padded handles are pushed downward, toward your lap.

To engage the **Brake Lock**, firmly apply the brake and push the **Brake Lock Pin** toward your body. If you are on an uphill slope or flat ground, also switch into Forward drive. If you are on a downhill slope, also switch into Reverse.

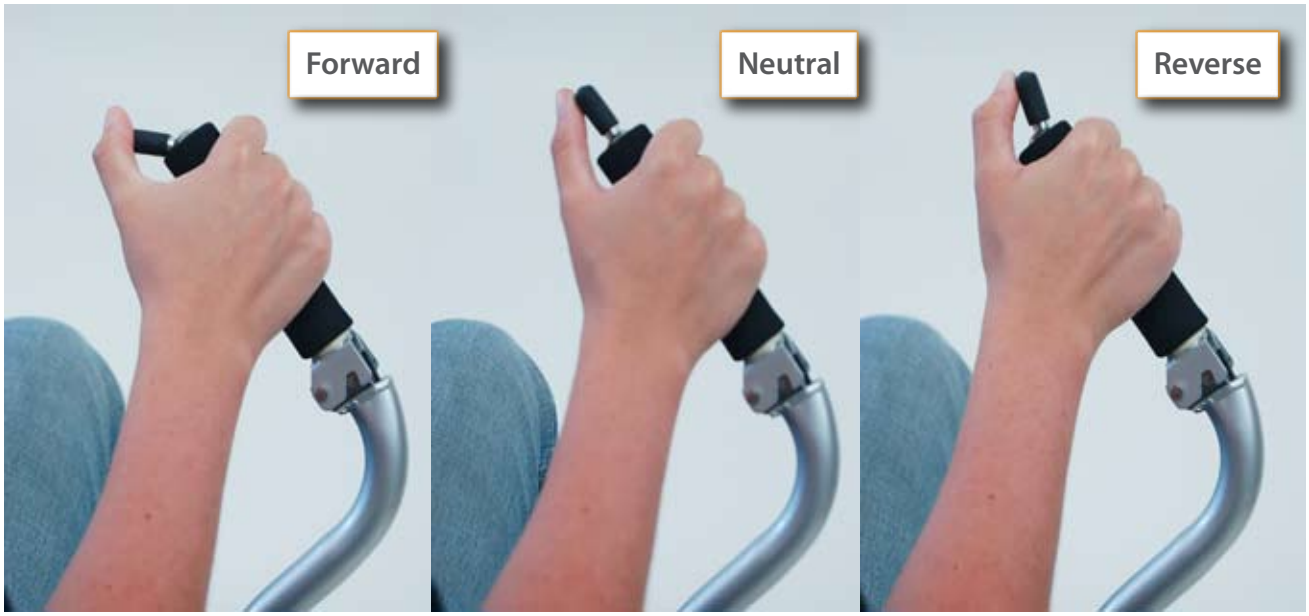
To release the brake, firmly pull the handle toward your body, as though you were applying the brake. The pin should automatically retract to release the lock.

Forward / Reverse / Neutral Toggle Switch

To shift into **Forward**, push the toggle switches toward your body.

To engage **Neutral**, move the toggle switches to the upright position (in line with the handle).

To shift into **Reverse**, push the toggle switches away from your body while simultaneously moving the lever back and forth slightly to engage the gears.

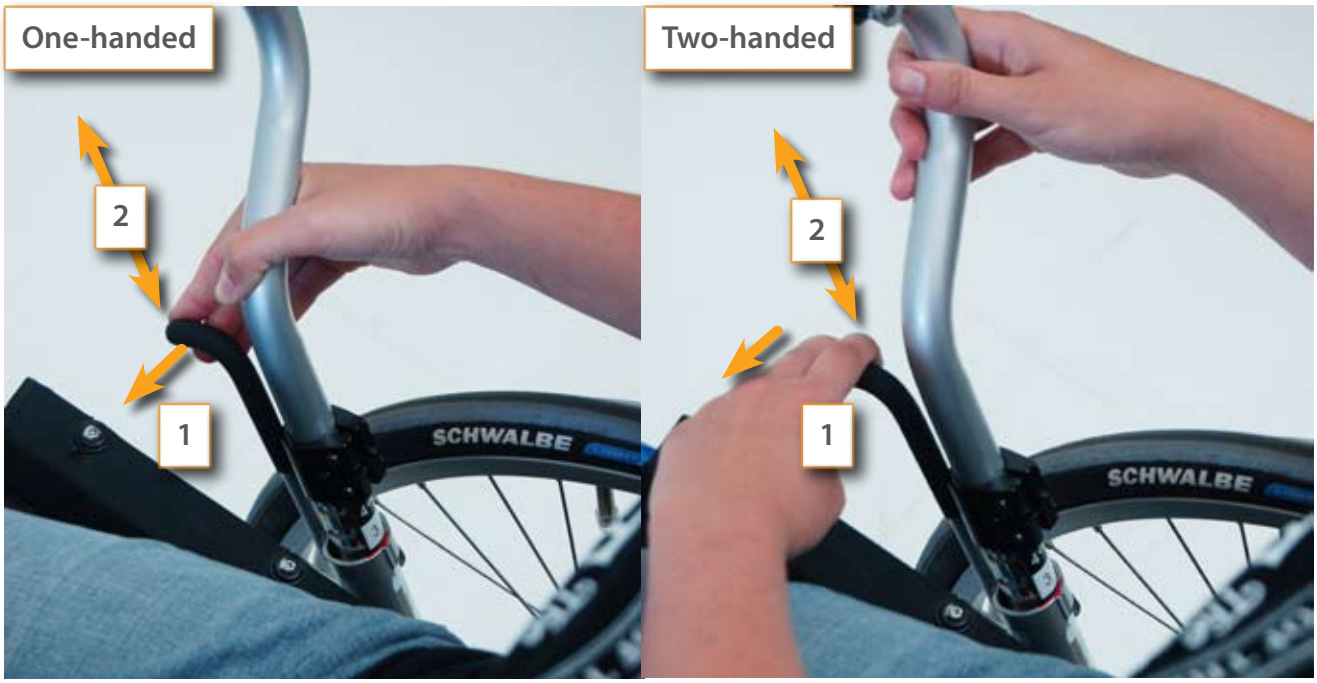


Gear Shifter

Your Pivot™ has 5 gears. Lower gears are for hills and surfaces that require more effort. Higher gears are for flatter, smoother surfaces where higher speeds are possible.

To shift your Pivot™, place your **Toggle Switches** in neutral (with practice, you will be able to shift gears without switching into neutral).

Push the **Gear Shift** in toward your body ("1" in figure). Select your gear (1-5) by raising or lowering the shifter and releasing it ("2" in figure). You will hear and feel a "click" as the gear locks into place.



Note: If you want to shift gears while on a hill, the toggle switches MUST be in the forward position to prevent rolling back.

7. Driving the Pivot™

After becoming familiar with the control switches and gear shifter you are ready to begin the process of becoming proficient with the Pivot™. It will take some practice before the Pivot™ becomes intuitive. Following are some recommended exercises.

All exercises should take place in an open space, with ample turning room and flat surfaces. If you experience unusual difficulty or excessive fatigue, please contact your healthcare professional or sales@riomobility.com.

Transferring

Consult with your healthcare professional for proper transferring instruction. The following is intended only as a guideline.

1. Position the chair on flat ground, or if this is not possible, facing uphill.
2. Switch the **Forward/Reverse/Neutral Toggles** into Neutral (previous section).
3. Place the **Levers** in the stowed position (all the way back).
4. Switch into Forward to prevent rolling back.
5. If installed, engage your wheelchair wheel locks. If you do not have wheel locks, engage the **Brake Lock** as described in the previous section.
6. Transfer into your chair as you normally would, using a transfer board if needed.
7. Switch to neutral and grasp the handles of the lever and move them forward.

Forward and Brake

Select your gear (1-5). You may want to start in one of the lower gears while learning to drive the Pivot™. As you become more comfortable, you will want to shift up or down according to the conditions and desired speed.

Place your left toggle switch in forward (toggles point in, towards your body) and push/pull your **Lever** a few times then gently engage your left brake by pushing down on the padded handle. Notice that pushing and pulling the lever results in forward motion. Repeat this for the right side. Practice this until you feel comfortable with the steering and braking motions.

NOTE: When pushing/pulling the levers, be careful not to inadvertently engage the brake, it will make the movement much harder!

Turns

Take the box your Pivot™ arrived in and place it in the middle of your training space. Practice driving around the box. For gradual left turns, push and pull the right hand lever. For sharper left turns, push and pull the right lever while engaging the left brake handle. For right turns reverse the process. Practice going around your Pivot™ box in both directions until you get the feel of gradual and sharp turns.

Reverse

Practice reversing around your Pivot™ box. Position both **Toggle Switches** in reverse (toggles pointed away from your body). Note: While holding the toggle in the reverse position, pull the lever back until you feel it engage.

Slowly push and pull the **Levers**. Practice backing up and braking. Occasionally you will need to push/pull more on one side to maintain a straight line, as you would with any steering mechanism. To make a turn in reverse, light pressure on the right brake will make your left wheel lead the turn. Light pressure on the left brake will make your right wheel lead the turn. Practice going around the box in reverse.

REMEMBER: At any time, you can switch to using your push rims simply by placing the toggles in neutral. This disengages the Pivot™ and allows the rims to move by hand.

Turning in Place

Place one lever in reverse (toggle switch pointed out) and one lever in forward (toggle switch pointed in). Using equal amounts of pressure push and pull your levers. Practice this movement until you are comfortable turning in place.

Note: After several training sessions, it is quite common to need your brakes or toggle switches adjusted. When cables are new, they will stretch more rapidly. If you notice a change in your braking or shifting ability, adjust according to the procedure on page 22.

8. The Pivot™ Out in the World

Before You Ride

Make sure that your Pivot™ is installed, adjusted, and maintained properly. Do not use the Pivot™ until you and your health care professional determine that you have enough experience to use it in an uncontrolled environment.

Use your wheelchair as described in your wheelchair manual and use the Pivot™ in the same safe manner that you would your wheelchair with pushrims. Follow all additional warnings and instructions for the Pivot™ in this manual.

Attachment and Transporting

Attach the Pivot™ in the same manner as you would your quick release wheels, but instead of pushing the button at the end of your quick-release axle, you will push the bracket though the **Clamp Pin**. To release, retract the latch and pull the wheel out of the axle sleeve. Use caution, as the lever may rotate downward when you release the latch.

Indoor Use

When moving slowly or in tight spaces remember you can still use the pushrims as you normally would – as long as both **Levers** are in neutral, the Pivot™ won't interfere.

Side Slope

Just as with your pushrim wheels, your wheelchair will have a tendency to roll down a cross slope. You will need to compensate to keep going straight. This will require extra power on the downhill side and may require braking on the uphill side. This is exactly what you do with pushrims though you may not be aware of this. With practice this will become just as natural.

Hill Climbing

The lower gears enable you to climb hills you would not be able to with your pushrims. It does take some practice so proceed with caution. You may easily wheelie, but if your anti-tips are adjusted properly this should not be a problem.

Descending an Incline

The brakes of the Pivot™ require minimal effort and there is no friction on your hand. However the ultimate braking power before the rear wheel slips is no different than your pushrims. Brake with the same caution you would use with your pushrim wheels.

Turning

Always mind your speed, especially when turning. You should have full control at all times. Do not exceed the maximum allowable speed recommended by your wheelchair manufacturer.

Obstacles

Be very careful going over bumps and curbs over 1" (25 mm) high. Initially use your pushrims to get over these bumps, NOT the lever drive. Approach bumps and curbs straight on and at very low speeds to avoid damage to your wheelchair and injury to you. Be aware of road surfaces, especially on inclines or declines. Watch out for water, ice, and oil films.

General Notes & Precautions

Mind your fingers and hands when using your lever drive.

Keep loose hair and jewelry away from the lever.

Keep children away from your lever drive to avoid possible injury to both you and the child.

Do not carry anything that obstructs your view or interferes with the lever operation.

Do not lift your wheelchair by the lever or handle.

Do not put weight on the levers – this includes weight due to objects and people.

This lever drive is meant for everyday use and is not intended for use in competition.

Rio Mobility is not responsible for any damage or injury due to misuse of your lever drive.

9. Special Adaptations

Rio Mobility can offer special adaptations tailored to your needs. Some are described below. If you have additional requests, please discuss with your heath care professional and contact customer service at sales@riomobility.com.

Lever

The lever can be adjusted to be longer by loosening the **Lever Length Adjustment Clamp** (as seen on p. 7), extending the **Upper Lever Tube**, and retightening the **Lever Adjustment Clamp**. If a shorter length than standard is required, a custom lever can be made.

Handle

If you find that you consistently inadvertently apply the brake while propelling, or the handle orientation is uncomfortable, the handle can be rotated by loosening the **Lever Length Adjustment Clamp** (as seen on p. 7), rotating the **Upper Lever Tube**, and retightening the **Lever Adjustment Clamp**.

Forward / Reverse / Neutral Toggle Switch

The **Toggle Switch** may be lengthened or a custom shape developed that requires less strength or dexterity.

Gear Shifter

The **Gear Shifter Lever** may be modified or lengthened to require less strength or dexterity.

Propulsion

If you have difficultly pushing or pulling the levers, the **Hub** may be modified to disable either. The push stroke in reverse can also be change to a pull stroke.

The Pivot™ can also be modified to have a lower gear ratio than standard.

Single Lever Drive

If you have use of only one arm, the Pivot™ can be modified to operate with only one lever.

10. Safety and Maintenance Instructions

Safety and Inspection Checklist

In addition to the requirements specified in your wheelchair manual, the following inspection schedule is required.

Inspection / Maintenance Item	Initially	Weekly	6 Months
Check and Tighten Hardware	✓	✓	
Brake Adjustment	✓	✓	
Direction Shifter Adjustment	✓		✓
Lubrication			✓
Brake Pad Wear			✓

Basic Maintenance Guidelines

Your Pivot™ was designed to require minimal maintenance. The gear hub is sealed for mtenance-free operation.

Inspect your lever drive frequently. Failure to inspect your lever drive and make necessary repairs or adjustments can result in injury to you or to others. Make sure all parts are correctly assembled and adjusted as indicated in this manual. Immediately replace any damaged, missing, or badly worn parts.

Make sure all fasteners are correctly tightened as described in this manual. Parts that are not tight enough can be lost or operate poorly. Over-tightened parts can be damaged or cause damage. Make sure any replacement fasteners are the correct size and type.

Have a qualified wheelchair or bicycle technician make any adjustments or repairs for which you do not have the correct tools, or if you have difficulty understanding or performing the instructions in this manual.

Brakes & Brake Lock Adjustments

It is common for your brakes to need adjustment, especially when your Pivot™ is new and the cables are first being used. Adjustment will be needed less often after the initial break in period.

When your Pivot™ is new, stretch the cable by applying the brake firmly 20 times.

Adjust the brake using the following procedure:

1. Rotate the wheels and note if they spin freely. If not, loosen the **Brake Adjustment Lock Nut** and incrementally rotate the **Brake Adjustment Barrel** clockwise until the wheel rotates freely.
2. Check that the **Brake Lock** will keep the wheelchair stationary for transfer. If not, loosen the **Brake Adjustment Lock Nut** and incrementally rotate the **Brake Adjustment Barrel** counter clockwise until the parking brake functions properly but does not take too much force to engage.
3. Steps 1 and 2 may need to be repeated to find the proper adjustment between the braking and parking brake function.
4. If the barrel adjuster is tightened to its limits, please contact sales@riomobility.com for a replacement brake. DO NOT adjust the cable yourself, as this means the brake has been worn to its useable limit.
5. Make sure the **Brake Adjustment Lock Nut** is tightened all the way down.

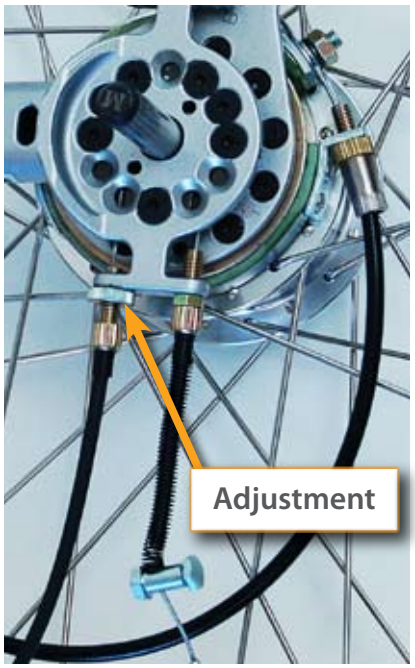
Direction Shifter Adjustment

It is common for your **Direction Shifter** to need adjustment, especially when your Pivot™ is new. Adjustment will be needed less often after the initial break-in period.

Adjust the Shifters using the following procedure:

1. Move the lever back and forth while simultaneously moving the **Direction Shifter** back and forth. Notice the range of the shifter movement when it is in neutral. At the middle of this range the shifter should be vertical (aligned with the handle).
2. If the middle of the range is toward you then loosen the **Shifter Adjustment Lock Nut** and incrementally rotate the **Shifter Adjustment Barrel** clockwise until the middle of the range for neutral is vertical.

Note: There are two adjustment barrels next to each other. Only adjust the one with the cable housing, not the spring.



1. If the middle of the range is away from you then loosen the **Shifter Adjustment Lock Nut** and incrementally rotate the **Shifter Adjustment Barrel** counter clockwise until the middle of the range for neutral is vertical.
2. Make sure the **Shifter Adjustment Lock Nut** is tightened all the way down.

Lubrication

Using wax, synthetic, or Teflon lubricants (not non-synthetic oil such as WD-40 or Tri-Flo), follow these guidelines to lubricate the lever drive:

Brake Lever	Put one drop of oil on the pivot point of the brake lever
Brake & Shift Cables	Put four drops of oil onto both ends of each cable. Allow oil to soak back along the line
Axles	Put one drop of oil on the axle and wipe across the surface

Important Note: The Pivot™ is designed to require minimal maintenance. Lubrication of parts other than those indicated above can cause damage and void the warranty.

Tires / Spokes / Pushrims

Follow the recommendations in your wheelchair manual regarding the maintenance and adjustment of Tires, Wheel Spokes, and Pushrims.

Brake Pad Replacement

The brake pads have been designed for very long life. If they need to be replaced, please contact customer service at sales@riomobility.com

Cleaning

Clean the lever drive with a damp cloth. Do not soak or spray with water or use detergent. Lubricate as necessary after cleaning.

Replacement Parts

Please contact sales@riomobility.com for information on replacement parts.

Storage

Your Pivot™ should be stored in a cool and dry location to maintain lubrication and prevent corrosion.

You may want to retain the box that your Pivot™ was shipped in, as it makes a handy container for storage of your lever drive, your lever drive accessories, the included tools, and the manual. It can also be used for shipment to the factory in case of maintenance and warranty repairs.

11. Troubleshooting Guide

The wheels do not spin freely, or your wheelchair tends to turn while coasting on flat ground.

The **Band Brakes** may need to be adjusted (see p. 22). If this does not correct the problem, please contact customer service and sales@riomobility.com.

The Direction Shifter does not shift properly into Forward.

The **Direction Shifter** may need to be adjusted (see p. 22). If this does not correct the problem, please contact customer service and sales@riomobility.com.

The Direction Shifter does not shift properly into Reverse.

The **Direction Shifter** may need to be adjusted (see p. 22). If this does not correct the problem, please contact customer service and sales@riomobility.com.

There is excessive side-to-side motion of the lever.

Please contact customer service at sales@riomobility.com.

12. Limited Warranty

Rio Mobility warrants the Pivot™ for two (2) years from the date of initial consumer purchase. This warranty covers any defects in materials and workmanship with the exclusions below:

Warranty Exclusions (except for factory defects)

- **Tires, tubes, spokes, and wheel rims**
- **Handrims**
- **Foam handgrips**
- **Forward / Reverse shift lever**
- **Any other normal wear-and-tear item**

This warranty is only available for the original owner or purchaser and is non-transferable.

Rio Mobility is to perform all warranty work if deemed necessary. Shipping costs to Rio Mobility are the sole responsibility of the buyer. Return shipping costs to the customer will be the responsibility of Rio Mobility. Rio Mobility is not responsible for damages incurred to product during product return shipping. All returns must be pre-approved and receive an official Return Authorization number from Rio Mobility.

Limitations

This warranty is VOID if:

- **Assembly and installation is not performed according to the instructions**
- **Preventative and routine maintenance as not been performed**
- **The frame number is removed or altered**
- **The hub gearbox seal is broken**
- **The lever drive is used in any competitive event**
- **The lever drive is used in stunt riding, jumping, or similar activity**
- **The lever drive is submersed or sprayed with water**
- **The lever drive is driven under a load greater than the maximum rating**
- **The lever drive is used in a manner contrary to the instructions in the Owner's Manual**

The warranty applies to U.S.A customers only. Please contact us for warranty information outside the U.S.A.

13. Product Registration / Warranty Form

Please complete and mail or fax this form to:

Rio Mobility
56 Tehama Street
San Francisco, CA 94105
(415) 520-0567 (fax)
sales@riomobility.com

Name : _____
Address : _____
City : _____
State / Province : _____
Zip / Postal Code : _____
Email : _____
Phone Number : _____
Rio Mobility Model # : _____
Serial #, Right Side : _____
Serial #, Left Side : _____
Purchased From : _____
Date of Purchase : _____

sales@riomobility.com
(888) 559-6225
(415) 278-9662